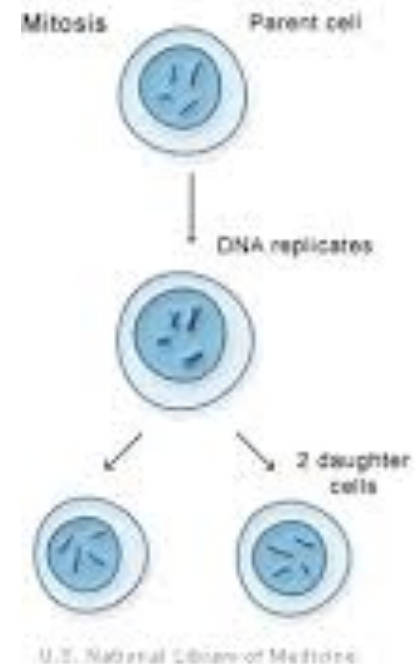


Cell Division



Cell Division

- All cells must divide to create new cells.
- This is true for bacteria, animal, plant, fungi, and protista cells.



Types of Cell Division

- Mitosis – a cell dividing to produce identical new cells.
- Meiosis – cell division that happens during reproduction.
- Binary fission – cell division by bacteria

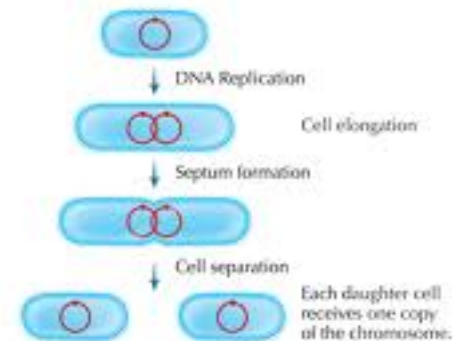
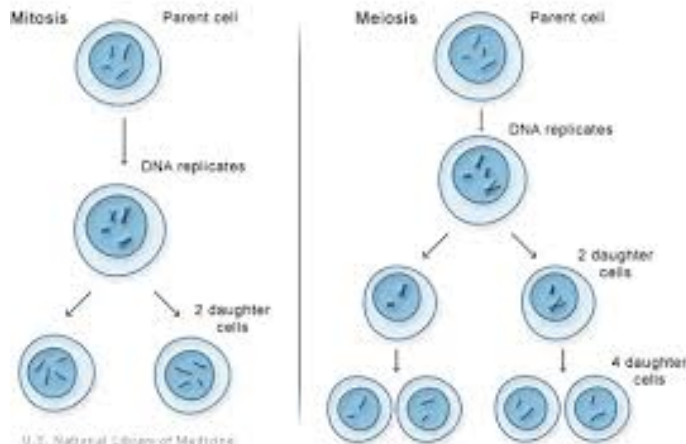


FIGURE 6.5. Binary fission in bacteria.

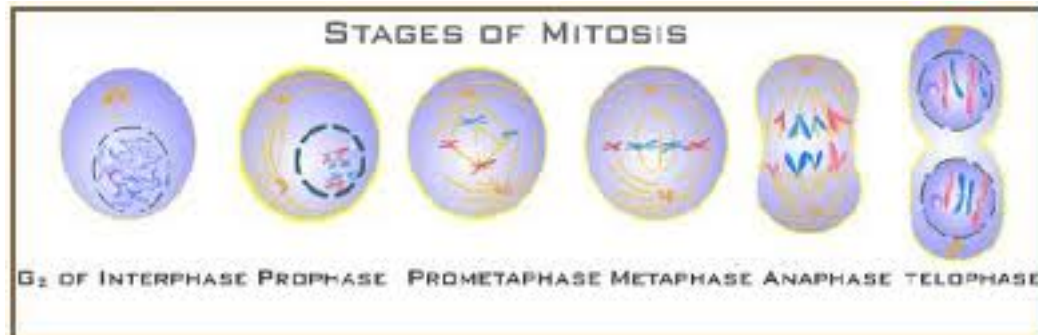
Mitosis

- The process in cell division by which the nucleus divides resulting in two new nuclei
- Almost all of the cells in your body use mitosis: skin, stomach, muscle



The steps of mitosis

- Cells go through 6 steps when splitting through mitosis.



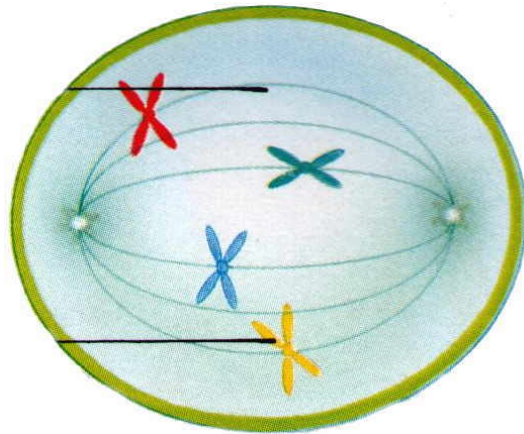
Interphase

- Living stage of a cell. Cell is not reproducing.
- Chromosomes are loose within the nucleus



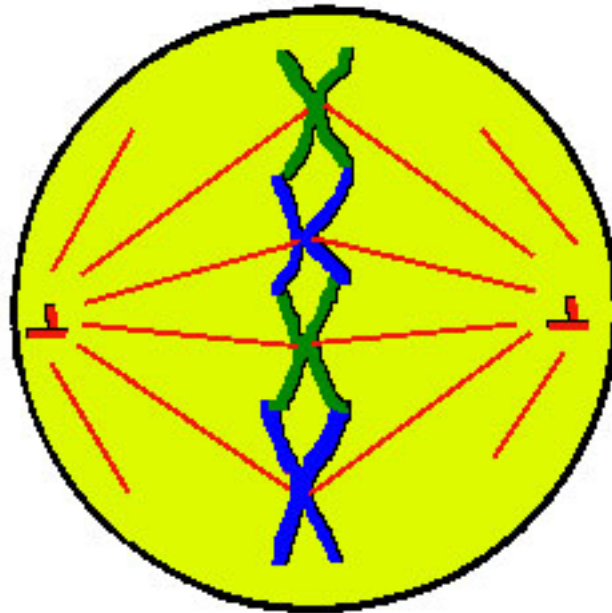
Prophase

- The chromosomes become visible
- Centrioles move to the opposite end of the cell
- thread-like fibers stretch across the cell
- The nucleus membrane dissolves



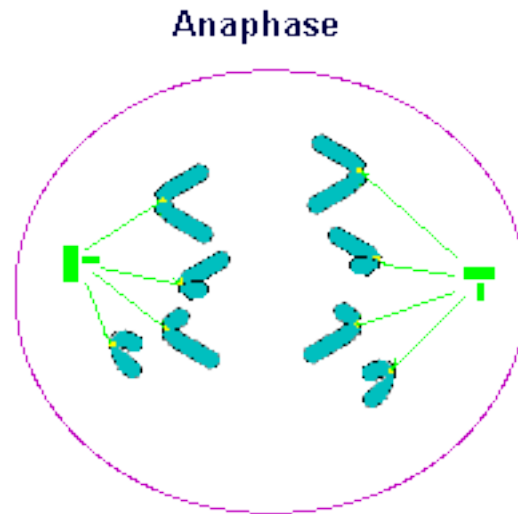
Metaphase

- The duplicate chromosomes move to the middle of the cell



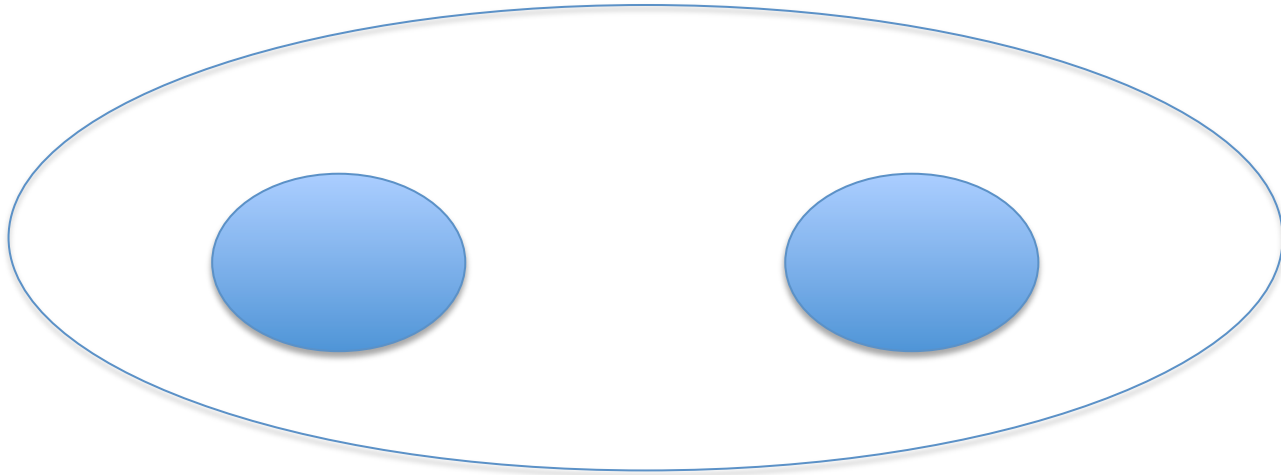
Anaphase

- The duplicate chromosomes split apart



Telophase

- A new nuclear membrane forms around each set of duplicate chromosomes, creating two new nuclei



cytokinesis

- The organelles organize themselves around the two new nuclei
- The cytoplasm splits forming two new cells

